A HISTORY OF THE HUMBLE PAPER BOX

Money Enough Spent on Package Wrappings to Finance a Campaign.

ORIGIN OF THE INDUSTRY

English Grocers Began It Years Ago in Their Efforts to Make Goods Attractive.

When the grocer or the dry goods store clerk or the baker sends his goods to the purchaser they are wrapped up in a paper or card box. This card box as soon as the contents are taken out is in nine cases out of ten thrown away or consigned to a shelf for future use. The box or bag is of no further interest except possibly to light a fire. The grocer or the dry goods store clerk is not much interested in the box. All that he knows or cares to know is that the box or bag is more or less indispensable to his business and that the firm has a certain price to pay for it. Yet the history of the paper box or bag is the history of one of the big industries of the country. Its mode of manufacture is interesting. The money spent on patents and special machinery in one year would easily run a Presidential campaign.

Years ago the grocers of England used to wrap goods purchased of them in paper. One day one of the grocers decided that the paper was clumsy, although they had reduced the wrapping of it around a parcel to a fine art, and sought for means whereby he could make his package of tea or sugar attractive to the customer. He folded the paper in various ways so as to form a receptacle for the goods.

First he cut the paper in rectangular form, overlapping till the ends met and pasted together two of them. This bag was found to be useful for all small articles, but as soon as anything heavy was placed in it the bag burst. Then the grocer doubled the bottom of the bag, finding that most of the weight was there. This, however, made the bottom too strong and the sides too weak. By this time other grocers and small venders had got hold of the idea and several brains were brought into contact with the bag question. Various methods of folding paper bags came into existence and the enormous demand for them throughout the country caused the paper mills to look into the question. The era of paper bag and box manufacturing then started.

Every mill that handled or manufactured the coarse heavy papers turned its attention to bag making. Patents were taken out thick and fast. Mills began to give up manufacturing paper alone and took up bag making as their main product. With the rapid growth of the United States and the native inventive genius of the people machinery was requisitioned into the art of paper bag and box making.

Nowadays there are hundreds of factories from coast to coast whose sole product is either paper bags or boxes and each factory specializes on a certain make or kind of bag. To do this nearly every manufacturer has some kind of a protective patent in the manufacturing end of it, as the Patent Office at Washington has decided that it is not possible to patent a shape. These number hundreds and cover every form of bag and box. Some have a special way of folding the bags whereby they open quite flat and make it easier for the grocer to place his wares therein. Others have bags of a special paper through which grease will not penetrate, others non-tearable bags, and so on through a gamut of bags of all shapes, sizes and colors.

While there are several classifications of bags, the card boxes may be divided into two distinct classes, the solid or set up class or the collapsible or caught up. The former are put in squaring machines and cut and folded to shape. Generally some patent method of fastening is used. These boxes are made for various purposes, usually for holding light articles, such as cereals, oatmeal and allied goods. These boxes, which are made from wood pulp, usually are then bound with paper decorated with the trademark or band of the firm which is selling the goods in them, folded flat and shipped in thousands to the buyers. The caught up boxes are manufactured in a different way, altogether, for instead of cutting the card they are put into machinery, which exerts a terrific pressure and shapes the board to the form desired.

There is an another from of box which has lately come on the market and is known as non-sifting. These are for goods that have the nature of powder or flour. In the usual card boxes made for face powder the powder works through the box and a good deal of it is lost. With the non-sifting box this is impossible.

HOW PAPER IS MADE.

Development of the Industry Since Wood Pulp Was First Used in 1870.

It would be hard to imagine a New York or any other modern community getting along without paper. The paper makers say it could not be done, and when any one starts to count up the many purposes to which paper is applied it seems that the paper men are right. We should have a hard time to get along without the product of the pulp mills. For one thing, and perhaps the thing we should miss most, there would be no printing unless the presses could be adapted to impressing the type on bolts of calico. The knowledge of steel and electricity which is passed on from year to year would degenerate into gossip.

The real development in the printing business began when the machine made paper was brought out. In the early days, when all paper was made by hand, five to ten reams a day were considered a fair showing for one mill. The first paper mill in the United States turned out hand made paper, the mill having been started at Troy in 1794. This mill, as well as the other pioneer mills, used rag pulp. Then in 1817 the first steam pulp mill was established at Pittsburg. The Fourdrinier brothers had invented a paper making machine in 1800, and within a few years other materials besides rags were utilized in making paper.

Pulp made from straw made its appearance in 1857, coming from a factory at Fort Edward, N. Y., and by the time the civil war began the newspapers were using this paper in such quantities that the price went up from $6 to $20 a ton. This straw paper was of a poor quality, brittle and hard on the type. During the war the demand for news of the exciting events of the day made the demand for newspapers heavy, and as early as 1861 the American paper mills were turning out more paper than were those of Great Britain and France.

The first wood pulp paper made its appearance in 1870. Its merits were not appreciated at first, but when the makers had learned to strengthen and improve it in various ways, the call for wood paper increased rapidly. Ninety-nine per cent. of the paper used to-day is made from wood pulp and all the grades are represented from the cheapest up to the finest kinds of calendered paper for artistic printing.

The wood pulp industry begins in the wilderness. Starting with the cutting down of the tall trees, the paper industry has some atmosphere of romance. When the hardy lumberman has brought the tree down and lopped off its branches, the boss of the camp exercises his ingenuity to get the logs to market. Advantage is taken of natural slopes leading to the nearby streams, and the logs are shot down these slopes to the water. If there are no slopes handy, rude railways must be devised. Once in the stream, the "drive" begins. The logs frequently form jams in the stream, and then one of the lumbermen must walk over the floating trunks, find the one that forms the key to the jam, and cut it away. When the jam begins to yield it is time for the lumberman to make a quick getaway, for his life hangs in the balance. A misstep means a plunge down among the rushing logs, and in the grinding, crushing mass the lumberman would never have a chance of escape.

When a large piece of water is reached the logs can be made up into rafts and towed to the mill. At the mill they are cut up into suitable lengths by a big circular saw and brought under the influence of the "barker" at the same time. The "barker" is a machine with rotating blades that gnaws off the bark and makes a frightful noise over it, too. It is said by people who have heard this voracious machine screaming over its food that it makes the worst noise that ever assaulted human ears. The saws are not far behind in this Wagnerian concatenation.

Except for use in the higher grade of papers the cut up logs are next ground up in grinding machines. The best pulp is produced by a chemical process that does not break up the fibres as the grinding machines do. Paper machines have two ends. One is the dry end and the other the wet. The pulp enters via the wet end, where it passes through a screen and flows along like thin milk. The standard width of the wet machine is seventy-two inches. In one form of machine the pulp flows along on an endless wire straining cloth of a fine enough mesh to permit the water to drain off without losing any of the pulp. The water mark is produced by the wire, and the arrangement of the wires at what is called the dandy roll serves to determine whether the paper is to be laid or wove. While the thin stream of pulp is travelling along on the wire cloth it is mechanically shaken sideways so that the fibres of the pulp cross each other at all sorts of angles to give strength to the paper.

After the pulp has passed through several kinds of rolls it passes on to an endless wet felt apron and so goes along to the pressure rollers. These rollers press out nearly all of the water left in the pulp after straining on the wire cloth, and here the pulp takes on the character of paper and is able to continue through all the other rollers without the blanket support. It passes between the drying and calendering rolls, some of which are heated to remove the last bit of dampness. As it comes out of the machine in its finished state the paper is wound up into enormous rolls, which may contain a mile or more of paper.

THE QUEST FOR FINE FURS.

Trappers Go to the Remotest Regions to Supply Demands for Pelts.

The hardiest of all the hardy explorers who penetrated the forests of North America in the early days of its settlement were the trappers. To meet the demand of Europe for furs these pioneers made their way deep into the unknown regions of the country, establishing here and there little trading posts remote from settlements, and these trading posts formed the vanguards of civilization. Albany and St. Louis, among other settlements which were later to become flourishing modern cities, were developed from trading posts established for the benefit of the trappers.

The use of beaver skins in New Amsterdam in place of gold or silver money was so prevalent that the beaver skin became part of the arms of New York, along with the windmill and the flour barrels. The French Canadian voyagers were as daring in their search for fur skins as the Spaniards were in their search for gold in Mexican and South American raids. The formation of the Hudson's Bay Company in 1670, with the control of all the country from the bay to the Pacific and from the great lakes to the Arctic Ocean, deprived the Canadian trapper of his independence as a fur trader, but the search went on without interruption and the skins were sold in London as fast as they could be collected, and continues down to the present day.

It would seem that, taking into consideration the thousands of fur bearing animals slaughtered every year to satisfy the demand of my lady, the supply would by this time have become slender. If the styles did not change every now and then it probably would have been. In fact some species have been very nearly exterminated. But when one kind of fur goes out of style, the animals wearing that variety have a chance to recruit their thinned ranks, so that by the time their turn comes round again they have multiplied and become numerous once more. But in the case of the Alaskan seal the animals were killed off so rapidly that the extermination of this species is predicted. Only bachelor seals are now killed, the mated ones being protected by law.

IT PAYS TO WRITE A POPULAR SONG

A Single "Hit" May Earn for Its Author $50,000 in Royalties.

PUBLISHING CENTRE HERE

A Few Large Concerns Handle the Year's Output of Lyrics—Most Profit in Cheap Editions.

The publishing of sheet music, like every other form of business which relies mostly upon the theatrical profession for its existence, is confined mostly to New York city and its immediate vicinity. A child of no definite parentage, it has grown within a decade to one of the most lucrative branches of the vast enterprises that cater to the amusement of the pleasure seeking public. From a few meagre lofts on Twenty-eighth street, the former "Melody Lane," it has, under the guidance of business men, become a substantial foundation for the building of beautiful buildings in one of the richest realty sections of the city.

There are hundreds of publishers in New York, but the few large or national concerns may be counted upon one's fingers. These few have their main offices or headquarters close to Broadway and may all be found within a radius of several blocks of Forty-second street. As in every other business, there are various branches in the publishing of sheet music. There are the high class editions, comprising operatic scores, symphonies and the works of the masters. Then the publication of comic opera, musical comedy and the semi-classical scores, and finally the million odd copies annually of the popular or five and ten cent store editions. This latter, although the most humble of all, is really the most pretentious from a profit standpoint. Although sold on a small margin of profit to permit the retailer to sell it for ten cents, the volume of business which emanates from one hit song mounts high into the thousands of dollars.

There is a certain amount of glamour or fascination about the composition of a popular melody, the sight of one's name on the cover of the music, and more than all the possible royalties.

"In hardly any other business," said a publisher, "are the returns so great for the minimum amount of energy expended. That is, of course, from the composer's standpoint, for, as in any other national organization, the wheels within wheels for worldwide distribution are just as complete and well oiled as in any other great system which extends from coast to coast.

"It is always of interest to the public how a popular song or ballad is conceived, written and composed, but as a rule their conjectures hit wide of the true mark.

"For instance: I recall a national campaign song used in one of the late Presidential contests which swept the country from the Atlantic to the Pacific, was whistled by every one who could remember a tune and which had a life that long outlived the President it helped to land in the White House. This song's career is interesting, inasmuch as it was written, composed, printed and shipped from New York to Washington all in the short space of twenty-four hours.

"I received the order for the song from the publicity manager of the political campaign about ten o'clock in the morning. 'We want a rousing campaign song,' he said over the phone, 'and we want it on sale in Washington to-morrow morning.' I remonstrated. I informed him that it was almost an impossibility, but when he assured me of its importance I gave him my word that the song would be shipped that night, and it was.

"I called in my best lyric writer. In two hours the poem was ready for the composer. A half hour later the song was complete on my desk, and by five o'clock that evening all the proofs had been corrected and the mammoth presses were grinding out the copies that were to become famous in a fortnight.

"This song alone realized thousands of dollars in royalty and earned, during its lifetime, nearly as much as the annual salary of the President which it elected. The latter day songs have, in the short space of three months, made their composers independently wealthy.

"One song writer, who, several years ago, was a waiter in a Bowery dance hall, now has an income of from $40,000 to $50,000 a year, realized solely from the royalties derived from his popular songs."

Each large publishing house has its staff of writers and the opportunities for the layman or amateur to break into this field are few. The royalties on a popular composition which sells to the consumer for 10 cents fluctuate. As a rule, they hover about the cent mark. That is, one cent for every copy which is sold. This, perhaps, seems infinitesimal—a trifle too small to be considered—but when one stops to consider that a successful song may sell a million copies, or $10,000 in royalties, they will readily see that the half hour or hour devoted to its composition was not wasted.

Then there is the interpolation in a big Broadway musical production, or then again, the "hit song" in that same performance. For instance, "Every Little Movement" in "Madame Sherry" is said to have earned $50,000. "Day Dreams," in "The Spring Maid," as much, if not more, with none of the expenses which are entailed in advertising a popular song. In a musical production there is practically no outlay required. The song sells itself from the advertising it receives by the Broadway show.

Some Old Vehicles.

There is an interesting collection of wheeled vehicles in the National Museum in Washington which was gotten together for the purpose of showing the development of conveyances for men and chattels from the most primitive times. One of the exhibits is a fullsized carette, or ox cart used by the Indians of Arizona and New Mexico, as well as in some of the remote parts of Spain. This cart was brought over by the early Spanish settlers. It has wheels about three and a half feet in diameter, made of three pieces of timber fastened together with dowels of wood, the wheel being thick at the centre to form the hub.

Another primitive type of wagon known as the Red River cart and used by the half-breeds in Canada, has five foot wheels, the wheels in this case having spokes, twelve in number. The native driver of this cart sits in it with his feet higher than his hips, the shafts being higher than the bed of the wagon. There is also a reproduction of an Egyptian chariot in the collection, the wheels of which have twelve spokes, with slots in them near the hob so that a rope can be run through to hold the spokes firmly in place. What is thought to be the oldest type of vehicle still in use is the Russian bashkir, or child's coach, with wheels made out of a solid slab of wood, having holes burned through the centre for the axle.

24 O'Clock System.

From the Railway Age Gazette.

The 24 o'clock system is to be adopted on the French railways for next summer's time tables. Inquiries as to the acceptability of the plan were sent to municipal bodies and chambers of commerce all over the country and a great majority favored it. It has been in use in Italy for many years.